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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------|---------------------|------------------|
| 09/871,077 | 05/31/2001 | Raman Naduhatty Selai | KUM-104US | 9291 |

7590 08/13/2002

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EXAMINER

NGUYEN, TAM M

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
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1764

DATE MAILED: 08/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/871,077

Applicant(s)

SELA ET AL

Examiner

Tam M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Objections

The expressions "3vol%", "5vol%", "250vol%", "180vol%", and "150vol%" in claims 8-12, respectively are objected. The expressions should be recited as --3 vol. %--, --5 vol. %--, --250 vol. %--, --180 vol.%--, and, --150 vol.%--, respectively. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

¹³
Claims 1-~~12~~ are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The expression "aromatic type material" in claim 1 renders the claim indefinite because it is unclear what aromatic material is to be used in the process. The examiner suggests that the word "type" be deleted in the claim.

The expression "the yield of raffinate increases by more than 3vol%" in claim 8 renders the claim indefinite because it is unclear what the yield of raffinate (3vol%) is compared to.

The expression "the yield of raffinate increases by more than 5vol%" in claim 9 renders the claim indefinite because it is unclear what the yield of raffinate is compared to.

The expression "the solvent dosage is less than 250vol%" in claim 10 renders the claim indefinite because it is unclear what the solvent dosage (250 vol. %) is compared to.

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The expression "the solvent dosage is less than 180vol%" in claim 11 renders the claim indefinite because it is unclear what the solvent dosage (less than 180 vol. %) is compared to.

The expression "the solvent dosage is less than 150vol%" in claim 12 renders the claim indefinite because it is unclear what the solvent dosage (less than 150 vol. %) is compared to.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims ¹⁻¹³ ~~1~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over Henry et al. (3,929,617).

Henry discloses a process for extracting aromatics from a hydrocarbon feedstock, which has a boiling point greater than 650° F (343° C), by contacting the feedstock with solvent(s) such as furfural. Henry also discloses that the solvents are generally used at dosages of about 100 to 300 %. (See col. 2, lines 3-15; col. 6, lines 2-45)

Regarding claim 1, Henry does not specifically disclose that the solvent is a mixture of furfural and an aliphatic amide. However, Henry discloses that the solvent can be a mixture of solvents selected from a list which includes furfural and dimethylformamide. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Henry by using furfural and dimethylformamide because one of skill in the art would pick any combination of solvents in the list including the combination of furfural and dimethylformamide.

Regarding claim 7, Henry does not specifically disclose the ratio of furfural to the amide solvent is in the range of 70:30 to 95:5. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Henry by using the claimed ratio because Henry does not limit the ratio of the solvents. Therefore, one of skill in the art would employ any ratios of the solvents including the claimed ratio and it would be expected that the results would be similar when using the claimed ratio in the process of Henry. Consequently, the modified process of Henry is similar to the claimed process.

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Hence, it would be expected that the process of Henry would have the claimed stability and would increase in the yield of the raffinate stream as claimed.

Conclusion

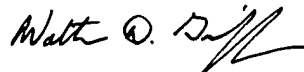
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (703) 305-7715. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marian Knode can be reached on 703 308 4311. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-5408 for regular communications and (703) 305-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Tam M. Nguyen
Examiner
Art Unit 1764

Tam Nguyen/ TN
August 12, 2002



Walter D. Griffin
Primary Examiner